REMARKS

Claims 12-13, 16-28 and 32-33 remain in this application.

In each of claims 12, 28 and 33 the word "about" has been deleted, wherever it occurred in the claims in conjunction with the recitation of "between 1.2 to 2.0 mm".

In addition, by the amendment of March 25, 2008 several other changes were submitted, however that amendment was refused entry by the examiner as containing new issues. Accordingly, this present amendment is being termed a substitute amendment with all of the changes so that the examiner can see them in one paper, rather than having to consider two amendments to see all of the changes which have been made since the amendment of October 25, 2007.

Claims 12, 28 and 33, all of the independent claims in this application, have now been modified so that each includes recitation that the axial slots form a Faraday cage, the interior of which is a field-free space. Prior to the present invention, the surfaces of this interior space could be coated to a sufficient thickness only with great difficulty, and not by a spraying method as recited in the claims. Each of claims 12, 28 and 33 recites that the particles used to coat the body are of a size of at least 150 μm so that the coating, even within the axial slots, reaches a thickness of between 1.0 and 2.0 mm. With the larger particles as recited in the present claims, this thickness is built up before so much charge is carried into the slots that the charge prevents further accumulation of particles. In other words, all of the claims now clearly recite an apparatus or a method in which the coating is built up to between 1.0 and 2.0 mm, even within the Faraday cage axial slots of the ferromagnetic body. None of

the cited prior art has, or in any way teaches, such a combination of limitations. And neither does the prior art teach the individual parts in a way such that a person skilled in the art would be lead to combine them and thus come up with the presently claimed invention.

In previous prosecution the examiner rejected claims 12-13, 16-27 and 33 as unpatentable over Hapsburg-Lothringen in view of Hopeck, Otani et al and Matsuzaki et al. With regard to this rejection the following is pointed out:

According to the Habsburg-Lothringen disclosure, the greatly preferred, and in fact the only method for coating of an armature of an electric motor which is sufficiently disclosed so as to be a teaching of the method, is a "fluidized bed electrostatic coating" method, see column 4, lines 45+. While Habsburg-Lothringen do mention other methods, none of these other methods are disclosed with sufficient detail to serve as a teaching of how to coat an article, and particularly not an article which has interior slots which form a Faraday cage as for example the rotor and stator of a dynamo electric machine.

Applicant briefly described the fluidized bed method in the background section of the present application at page 2, paragraphs 5 and 6. However, it is pointed out that with such a method, even as disclosed by Habsburg-Lothringen, it is not possible to create relatively large layer thicknesses such as between 1.0 and 2.0 mm, particularly not within the Faraday cage of the interior of the area inside the axial slots of a ferromagnetic body of a dynamo electric machine.

While Habsburg-Lothringen include an indication that they do not want their invention to be limited to the fluidized bed method, it is pointed out that they do not provide

any indication that a "direct powder spraying onto the body" can be used to achieve a sufficiently thick coating, of between 1.0 and 2.0 mm. And more importantly, they do not teach that such a spraying method could achieve a sufficient thickness within the slots of an electromagnetic body of an electrical machine.

This requirement is now recited by all of the claims. As pointed out by the examiner in the last 4 lines of page 4 of the last Office action, this was one area of the claims which may have been lacking. Accordingly, as suggested by the examiner, this has been corrected by the present amendment.

Hopeck describes a coating method in which connecting elements 16 and 18 of a dynamo-electrical machine are coated with epoxy powder by means of spray methods, and that layer thicknesses of up to 0.020 inches are produced. First, it is pointed out that these connecting elements of Hopeck are exterior pieces only. Hopeck has a dynamo electric machine 10 of the type having conductors which are hollow and carry coolant within the conductors. For explanation purposes, these conductors are of the nature of, and are at least similar to, what would be obtained by making conductors of 1/4 inch copper tubing. They run through the machine and their ends are exposed. Each of these ends must be connected to another conductor by loop connections 16 and 18, which are the elements being coated by Hopeck.

Thus, the articles being coated by Hopeck are essentially, as stated by Hopeck at column 3 lines 15-20, elbows etc. The articles coated by Hopeck do not include reentrant shapes at all similar to the interior of slots in a dynamo electric machine as taught by

applicant. From Hopeck one skilled in the art does not find any indication whatsoever that the spray method could be used for coating the surfaces which are inside the slots of a dynamo electric machine. This is precisely because the slots act as a Faraday cage. At most Hopeck coats what may be a u-shaped member with a very wide bottom of the "U." This is a shape which does not at all equate to the slots of a dynamo electric machine. Without the knowledge taught by applicant in the present application, coating thicknesses of this magnitude are simply not possible within the slots of a motor frame. Even though Hopeck gives a measurement for the layer thickness of up to 0.045 inches, this measurement does not refer to the coating of the surface of the interior of the slots, but only to external connecting elements.

Applicant's slots form a Faraday cage which would preclude such a thickness of a spray coating from building up within them without some further knowledge beyond the teachings of Hopeck. The knowledge necessary to accomplish this is only presented for the first time within applicant's disclosure.

In other words, a layer thickness such as recited in the present claims, including within the slots of a motor, is simply not attainable by a spray coating method without the knowledge which is disclosed for the first time by the present invention.

As one skilled in the art knows, the field lines of the electrical field that develops between the spray gun and the body being coated are concentrated at pointed protrusions of the body. Inside the slots, a Faraday cage is created, which Faraday cage eliminates all field

lines. Therefor the inside of the slots could not be coated to a sufficient thickness by spraying until after the advent of applicant's invention.

According to the present invention, particles of a defined size, having an average diameter greater than 150 μm, are used for the spraying method. By using such coarse plastic powder, which is sprayed onto the motor armature including into the slots, each of which forms a Faraday cage, a sufficiently large layer thickness of approximately 1.0 to 2.0 mm can be formed on both the outer circumference and also on the inner walls of the slots. In the course of the deposition of these coarse powder particles, markedly less electrical charge accumulates at the surface, so a potential difference continues to exist between the charged particles of the spray gun and the grounded dynamo electric machine.

The use of spraying this coarse-particle plastic powder with a mean diameter of greater than150 μm, however, has not previously been known to one skilled in the art, and especially it is not taught by any of the cited references.

Quite the contrary. Until now, for the use of spray nozzles, it was only known to use markedly smaller particles with mean diameters of less than 100 μm. For this reason, the claims have been revised such that now all of them clearly recite the particle size, and thus all of the claims define over the teachings of Hopeck.

While Matsuzaki et al does disclose the use of a particle size in the range from 3 to 180 μm, the only disclosure in Matsuzaki et al for doing any actual coating is found at column 5 lines 25-55, and is an "electrostatic fluidized bed" coating method and apparatus.

Matsuzaki et al mention spraying at column 2 lines 57-68, but never teach using the larger sized particles for coating by using a spraying method. The spraying which Matsuzaki et al mention at column 2 lines 57-68 is for checking the changeability of charge controlling particles. **It is not used for any coating process**. The only coating method or apparatus disclosed by Matsuzaki et al is by using a fluidized bed. Matsuzaki et al do not teach or suggest any spraying method or apparatus used for coating any elements which are at all equivalent to the dynamo electric devices recited in the claims to be coated by applicant.

In further point of fact, the Matsuzaki et al reference points precisely away from coating by using a spraying method, since Matsuzaki et al use a special "Charge-Controlling-Agent" (see claim 1 and column 2 lines 22-68). This "Charge-Controlling-Agent" is a multitude of particles having a diameter of 0.01 to 1 μm which are adhered to the larger particles of plastic. For technical reasons, which involves the entirely different sizes of particles, this "Charge-Controlling-Agent," with its very small diameter particle size, cannot be sprayed together with the larger particles of up to 180 μm diameter by means of any known spraying methods. The two entirely differently sized particles will simply not work together in any known spraying apparatus. And this precludes the use of Matsuzaki et al as a valid teaching for anything but a fluidized bed method of coating.

The fluidized bed coating method of Matsuzaki et al for a motor armature is quite well known. However, as set forth in the background section of the present application, regardless of this particle size as taught by Matsuzaki et al, one skilled in the art finds no indication whatsoever, not in Matsuzaki et al, and not in any of the cited prior art, of applying plastic

powder with a particle size having a diameter of greater than 150 μm to a motor armature by means of "direct powder spraying".

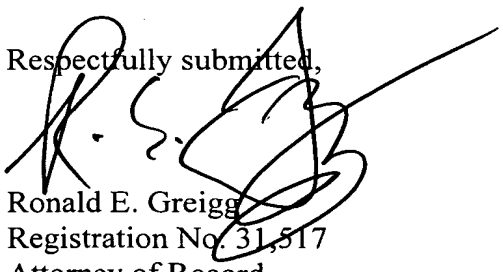
Therefore a combination of the cited references does not teach the particulars of the present invention, especially not as currently recited in the claims. The present invention is only realized from the prior art based on impermissible hindsight, and only with knowledge of the present invention already in hand.

As pointed out above, claims 12, 28 and 33, plus the claims which depend on them, are therefore not anticipated, and further are not made obvious, by the cited references.

For all of the above reasons, whether taken singly or in combination with each other, entry of this amendment and allowance of the claims are courteously solicited.

The Commissioner is authorized to charge payment of a one month extension of time, or any other necessary fees in connection with this communication, to Deposit Account Number 07-2100.

Respectfully submitted,



Ronald E. Greigg
Registration No. 31,517
Attorney of Record
CUSTOMER NO. 02119

GREIGG & GREIGG, P.L.L.C.
1423 Powhatan Street, Suite One
Alexandria, VA 22314
Tel. (703) 838-5500
Fax. (703) 838-5554
REG/SLS/ncr
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